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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/503,110

02/14/2000

Takeshi Aimoto

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EXAMINER

LY, ANH VU H

ART UNIT

PAPER NUMBER

2667

7

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/503,110

Applicant(s)

AIMOTO, TAKESHI

Examiner

Anh-Vu H Ly

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,9,11 and 29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,5,7,9,11 and 29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to applicant's amendment filed December 09, 2003.

The proposed amendment to the claims has been entered. Claims 1, 5, 7, 9, 11, and 29 are currently pending.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 09/503110 on February 14, 2000. It is noted, however, that applicant has not filed a certified copy of the 08-012514 Japan application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kakuma et al (US Patent No. 5,555,265). Hereinafter, referred to as Kakuma.

With respect to claims 1 and 11, Kakuma discloses (col. 7, line 32 – col. 8, line 21 and Fig. 3B) a schematic diagram showing a switching equipment format of an ATM cell (a packet) comprising 2-byte tag information added to the beginning of a cell, attribute indication, Switch Tag, and QCC. Herein, the QCC tag represents the quality class, whereby, the quality class is determined corresponding to an allowable value of cell loss ratio or cell discard ratio (sending a packet including information indicative of a priority related to packet discarding). Further, the quality or cell loss ratio of a service requested by a subscriber depends on the service type such as image data, voice data, and LAN data (different traffic classes). Furthermore, as shown in Fig. 3B, the line interface device tag is followed by the VPI/VCI. The VPI/VCI is rewritten corresponding to the VCI conversion table 12. Herein, the VPI/VCI indicates virtual paths and virtual circuits for data transmissions of a service type requested by the subscriber such as image data, voice data, and LAN data (sending a packet including a traffic class indicative of a packet transfer). This means, the VPI/VCI specified in the ATM cell is corresponded to the traffic class indicative of a packet transfer.

Kakuma discloses (col. 7, line 66 – col. 8, line 3) that when a call is set and a service requested by a subscriber is notified to the switching equipment, the quality class allocated to the service is detected and the content of the QCC tag that represents the quality class is written in the VCI conversion table 12 (storing information indicative of a priority related to packet discarding).

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Kakuma discloses (col. 8, lines 58-61) that when the write band of the buffer for the quality class 0 becomes larger than the read band (a predetermined discard condition), since the buffer for the quality class 0 gets overflowed, the cell is discarded (performing selective discard processing on packets belonging to a particular traffic class in conformity with a predetermined discard condition determined by priority based on the information indicative of a priority related to the packet discarding).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 7, 9 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakuma et al (US Patent No. 5,555,265).

With respect to claims 5, 7, and 9, Kakuma discloses in Fig. 1, an ATM switching system for switching and discarding fixed length cells based on quality class. Kakuma does not disclose the steps of determining whether or not the data portion of each packet of a particular traffic class is divided from the same transmission message as data portion of a previous packet; performing packet discarding on packets having the discard condition in units of transmissions message; starting discard processing on packets having a predetermined discard condition determined by priority; continuing the discard processing on subsequent packets including part of the same transmission message as data portions of already discarded packets; excluding packets of the same transmission message as data portions of previously sent packets from

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packets to be discarded; and starting the discard processing from a packet including a head data block of a subsequent new message. However, the processing steps stated above are well known in the art for controlling congestion in communications networks. Wherein, packets transmitted from the source including the sequence number (SN) tag in the header information for identifying the position of the packet in a sequence of transmitted packets of a message. And whereby, packets of the same message can be all discarded once a packet of a message determined to be discarded or only violated packets of the same message are discarded. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of determining whether or not the data portion of each packet of a particular traffic class is divided from the same transmission message as data portion of a previous packet; performing packet discarding on packets having the discard condition in units of transmissions message; starting discard processing on packets having a predetermined discard condition determined by priority; continuing the discard processing on subsequent packets including part of the same transmission message as data portions of already discarded packets; excluding packets of the same transmission message as data portions of previously sent packets from packets to be discarded; and starting the discard processing from a packet including a head data block of a subsequent new message in Kakuma's system, to prevent congestions.

With respect to claim 29, Kakuma discloses (col. 7, line 32 – col. 8, line 21 and Fig. 3B) a schematic diagram showing a switching equipment format of an ATM cell (a packet) comprising 2-byte tag information added to the beginning of a cell, attribute indication, Switch Tag, and QCC. Herein, the QCC tag represents the quality class, whereby, the quality class is

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determined corresponding to an allowable value of cell loss ratio or cell discard ratio (means for receiving a user packet including sub-class information indicative of a priority related to packet discard). Further, the quality or cell loss ratio of a service requested by a subscriber depends on the service type such as image data, voice data, and LAN data (different traffic classes).

Furthermore, as shown in Fig. 3B, the line interface device tag is followed by the VPI/VCI. The VPI/VCI is rewritten corresponding to the VCI conversion table 12. Herein, the VPI/VCI indicates virtual paths and virtual circuits for data transmissions of a service type requested by the subscriber such as image data, voice data, and LAN data (means for receiving a user packet including traffic class information). This means, the VPI/VCI specified in the ATM cell is corresponded to the traffic class indicative of a packet transfer.

Kakuma discloses (col. 7, line 66 – col. 8, line 3) that when a call is set and a service requested by a subscriber is notified to the switching equipment, the quality class allocated to the service is detected and the content of the QCC tag that represents the quality class is written in the VCI conversion table 12 (storing traffic class information and sub-class information from user packet).

Kakuma discloses (col. 8, lines 58-61) that when the write band of the buffer for the quality class 0 becomes larger than the read band, since the buffer for the quality class 0 gets overflowed, the cell is discarded (packet discard control means operative to selectively discard user packets by specifying user packets to be discarded based on a priority related to packet discard indicated by sub-class information; wherein user packets are selectively discarded in accordance with the sub-class information to which each user packet belongs even if the user packets belong to the same traffic class).

Kakuma discloses in Fig. 3B, a switching equipment format of an ATM cell comprising header information and payload. Kakuma does not disclose that the header information including delimiter information which indicating a correspondence of the packet to a data unit of a transmission message. However, a packet having header information including a sequence number (SN) for identifying the position of the packet in a data unit is known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the SN tag in the header information of an ATM cell in Kakuma's system, to identify the position of the cell associated with the transmissions message.

Kakuma does not disclose wherein the packet discard control means specifies user packets to be discarded in data units of a transmission message based on the delimited information in each user packet. However, the step of discarding packets of a message based on the delimited information in each user packet is well known in the art. Wherein, packets transmitted from the source including the sequence number (SN) tag in the header information for identifying the position of the packet in a sequence of transmitted packets of a message. And whereby, packets of the same message can be all discarded once a packet of a message determined to be discarded or only violated packets of the same message are discarded. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of discarding packets in data units of a transmission message based on the delimited information in each user packet in Kakuma's system, to prevent partially transmitted message.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 5, 7, 9, 11, and 29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Hanaoka (US Patent No. 5,583,858) discloses an ATM switching device.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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